

**EPA'S CONDITIONS AND RECOMMENDATIONS FOR LDEQ ASBESTOS
DEMOLITION AND DISPOSAL PROCEDURES FOR JEFFERSON PARISH,
ORLEANS PARISH, PLAQUEMINES PARISH AND ST. BERNARD PARISH IN THE
AFTERMATH OF HURRICANE KATRINA AND HURRICANE RITA**

I. INTRODUCTION

In the wake of Hurricane Katrina and Hurricane Rita, EPA has been called upon to provide guidance on proper practices for the demolition and disposal of buildings rendered structurally unsound or otherwise uninhabitable by the Hurricane and any subsequent flooding. Various federal regulations apply to building demolition activities and to disposal of certain types of wastes or debris. Areas of primary federal concern include asbestos demolition requirements, the proper disposal of electrical equipment containing PCBs (e.g., distribution transformers, lighting ballast, and capacitors) and storage tanks. EPA has already provided general guidelines on the appropriate practices for demolition and disposal of structurally unsound buildings damaged by Hurricane Katrina and for the burning of vegetative, structural, or mixed debris associated with the Hurricane. These two guidelines, "Demolition Guidance for Structurally Unsound Buildings Damaged by Hurricane Katrina" and the "Emergency Hurricane Debris Burning Guidance", are attached for information. The two guidelines recognize that the extraordinary circumstances caused by Hurricane Katrina may make full compliance with certain federal regulations difficult, and specify actions that should be taken nonetheless to the extent feasible to minimize the health, safety, and environmental risks associated with demolition and disposal practices.

The flooding of the City of New Orleans and nearby communities following Hurricanes Katrina and Rita poses particularly difficult challenges for recovery and reconstruction efforts. It is estimated that the hurricanes and floods left as many as 260,000 buildings structurally unsound or otherwise uninhabitable. As many as 170,000 of these structures, a significant fraction of which are residences, may contain asbestos, lead paint, or other hazardous materials. The volume of debris from the demolition of these structures plus other debris from the hurricanes and floods is overwhelming. In addition, the New Orleans area has one of the largest and most destructive Formosan termite infestations which makes disposal of debris from the demolition of homes in that area problematic. To prevent further spread of this termite, the Louisiana Department of Agriculture and Forestry has restricted where in Louisiana potential Formosan termite contaminated debris might be disposed. Yet, it is recognized that landfill capacity in the immediate area is insufficient to handle the volume of debris.

The Louisiana Department of Environmental Quality (LDEQ), in a letter sent to EPA on September 22, 2005, outlined a set of demolition and disposal practices for the New Orleans area that are designed to follow EPA's two guidelines to the extent practical without impacting timely cleanup and removal. According to LDEQ, if it strictly followed the two guidelines, it would take years to complete the inspection and removal process and may result in moving debris that may contain the Formosan Termite to less-infested areas. By adopting the practices outlined in its letter, LDEQ believes that the New Orleans area would be free of debris within six months

and that reconstruction could begin. LDEQ has asked for EPA's concurrence that, given the circumstances, the approach outlined in the LDEQ letter represents a reasonable approach for timely removal and disposition of the debris.

EPA acknowledges the extraordinary circumstances facing the State and local communities and the truly daunting tasks associated with clean up and disposal of so much debris. EPA is committed to providing assistance to deal with this massive effort. The Agency shares the State's desire to strike the right balance between implementing an expeditious and efficient clean up plan and protecting public health and the environment. EPA appreciates the State's efforts to properly remove and dispose of asbestos containing material in accordance with previous disaster-related guidance and state and federal requirements, specifically the federal asbestos National Emissions Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61, Subpart M.

To help facilitate the rebuilding of the New Orleans area, EPA recognizes under these extraordinary circumstances, it needs to consider all available options including granting enforcement discretion when appropriate measures can be taken to address and reduce the environmental concerns.

II. SUMMARY OF LDEQ'S PROPOSAL

LDEQ proposes to demolish certain residences without inspections and to dispose of the debris by using air curtain combustion as one means of disposal. LDEQ intends to require an amended water misting system on the exhaust side of the air curtain destructors to further reduce particulate emissions. LDEQ also intends to provide air monitoring for asbestos and lead on the downwind side of the air curtain destructors. All of the air curtain destructors will be operated in uninhabitable areas of the city. The LDEQ will conduct periodic representative sampling of ash prior to disposal or reuse. A more complete description of the approach is included on pages 10 - 13 of LDEQ's "Hurricane Katrina Debris Clearing, Removal, and Disposal Guidelines" which is included by reference herein.

III. SUMMARY OF CONDITIONS AND RECOMMENDATIONS

This document and accompanying letter provide a no action assurance for persons demolishing a large number of residences in a limited area which are not in imminent danger of collapse, including structurally sound and unsound residences which are uninhabitable and subject to a government ordered demolition without 1) requiring a prior inspection by an asbestos trained person and 2) removing asbestos containing materials for proper disposal prior to the demolition. This document further addresses the disposal of the debris from these residences using air curtain destructors.

While NESHAPS allows structurally unsound buildings which are in imminent danger of collapse to be demolished without prior inspection, it also requires the debris to be treated as though it contains asbestos and disposed of in accordance with NESHAPS requirements (approved landfill, 6 inches of soil, posting, recordkeeping, and a management plan to ensure the

asbestos is not disturbed and made airborne.)

Wetting the structure before and during demolition and the resulting debris until final disposal will minimize the risk of releasing asbestos fibers during demolition and movement of the debris. While EPA has data to indicate that the burning of the chrysotile form of asbestos at the temperatures expected with the air curtain destructor may result in the transformation of these chrysotile fibers into forsterite, which does not present the same hazards of chrysotile airborne fibers, EPA believes monitoring is necessary to ensure that burning of these structures does not pose unacceptable risks. To ensure appropriate monitoring, LDEQ must develop a monitoring plan that must be approved by EPA. EPA plans to review the data from the monitoring and make adjustments to this document if necessary or even rescind it, if appropriate. In addition to asbestos, these structures may contain lead paint. Thus, EPA is requiring the development of a monitoring protocol to address lead levels as well as asbestos and any other appropriate pollutants to ensure that this activity does not present environmental problems greater than the one that Louisiana is trying to solve (i.e., the debris arising from uninhabitable houses).

IV. CONDITIONS

A. PURPOSE OF THIS SECTION

This section lays out the conditions under which EPA will exercise its enforcement discretion and grant a no action assurance as outlined in the cover letter.

B. APPLICABILITY AND SCOPE

This document applies only to residences with four or less units that are located in the following parishes in the New Orleans area: Jefferson, Orleans, Plaquemines, and St. Bernard, and which are being demolished under an order of a state or local government because the facility is structurally unsound and in danger of imminent collapse or because it is uninhabitable as a result of Hurricane Katrina. This document does not apply to other types of buildings, renovations, or debris from renovations. See the attached guidances issued by EPA for those buildings and renovations, “Demolition Guidance for Structurally Unsound Buildings Damaged by Hurricane Katrina” and the “Emergency Hurricane Debris Burning Guidance”.

C. TIMEFRAME

This document is effective for 6 months from the date of EPA’s approval of the monitoring protocol noted below. If at any time during this six month period EPA receives data/information that raises public health or environmental concerns, EPA may modify or withdraw this document and its companion no action assurance. EPA may extend the effective date if deemed appropriate.

D. NESHAP REQUIREMENTS

If a trained asbestos inspector/licensed asbestos contractor is on site to help identify

asbestos material, the asbestos containing material must be adequately wetted, segregated out, kept wet, labeled, and disposed of in a landfill that meets the NESHAP requirements to the extent feasible.

E. ASBESTOS TRAINED PERSONNEL

1. EPA will work with LDEQ to identify available asbestos trained personnel (as specified under 40 CFR §61.145(c)(8)) from other Regions and states that could be deployed to the New Orleans area to assist. Recognizing the need to focus their initial efforts to deal with the buildings that are non-residential or residential with more than 4 units, EPA concurs with LDEQ's proposal to demolish residential buildings with 4 or less units, including those that are structurally unsound and those that are structurally sound but uninhabitable and must be demolished, without having trained asbestos personnel on site to help segregate the waste or to inspect and sample.
2. In those circumstances where the residence is not inspected for asbestos, asbestos is not removed, and the resulting waste is not segregated with oversight by trained personnel, LDEQ will dispose of the material either in accordance with this document or in an appropriate landfill and in compliance with NESHAPs requirements.

F. DEMOLITION

1. Public access to the demolition sites must be restricted. Persons within the demolition site must wear appropriate personal protective equipment (PPE) to prevent potential exposure from the inhalation of asbestos fibers and other hazardous materials.
2. Demolition equipment must not run over the debris to break it up into small pieces.
3. Wet structures before and during demolition to reduce the potential for air migration of asbestos. If water is not available, delay demolition until it is available. Keep debris wet until final disposal. If moved offsite, label debris as asbestos.

G. NOTIFICATION

Notification of demolition must be provided to LDEQ as early as possible, but no later than one working day after such activity begins.

H. AIR CURTAIN DESTRUCTOR (ACD)

1. Disposal of debris described in Section A may occur by combustion using the air curtain type of destructors with overfire air. The ACD must be operated in such a manner as to produce the least amount of particulate and gaseous emissions.
2. LDEQ must follow its own guidelines for ACD procedures as outlined in its "Hurricane

Katrina Debris Clearing and Disposal Guidelines,” incorporated by reference herein.

3. ACDs must be constructed in such a way to eliminate the potential for soil and groundwater contamination.
4. Based on air modeling predictions, no burns may be conducted within 1000 feet of occupied areas.
5. The mean burn temperature must remain above 800 degrees C.
6. The conditions for operation of the ACD unit will be determined through execution of the approach described in Appendix A, entitled: “Approach for Conducting Source Emission Characterization Tests of Open Burning of Vegetative and Demolition Debris.”
7. Access to burn sites must be restricted to workers only within the 1000 foot zone.
8. Workers in the 1000 foot zone must wear appropriate PPE to prevent potential exposure from the inhalation of asbestos fibers and other hazardous materials.

I. MONITORING

Prior to demolishing residences under this document, LDEQ shall ensure adequate monitoring is conducted to address the ACD/Burn Sites as well as the Demolition Sites for activities covered by this document and which provides information sufficient to ensure adequate protection of public health and the environment. EPA acknowledges that LDEQ is currently working with EPA and other agencies to develop an Air Monitoring and Contingency Plan for debris activities (Appendix B), consistent with the Overview Plan for Ambient Monitoring after Hurricane Katrina. (Appendix C)..

The Region 6 contact is the Air Monitoring Staff in the Environmental Unit in the New Orleans emergency response center.

LDEQ should also coordinate worker protection monitoring to meet OSHA requirements with regional air sampling currently being conducted by LDEQ and EPA. Since Louisiana does not currently have an OSHA approved state plan, the local and state workers are protected under the EPA Asbestos Worker Protection Rule (WPR), 40 CFR Part 763, Subpart G. LDEQ must make data available on a website for First Responders so that they can make decisions on the appropriate worker protection decisions.

J. REPORTING

1. Monitoring data must be submitted to EPA Region 6 (with a copy sent to EPA Headquarters) as it shall direct.

2. Monitoring data must be submitted to EPA Region 6 (with a copy sent to EPA Headquarters) as it shall direct.
3. Data from air sampling and worker protection monitoring must be posted on the LDEQ website as soon as possible, but no later than two (2) days of receipt of test results, so that emergency responders can make worker protection decisions for area workers

K. DISPOSAL OF ASH KNOWN TO CONTAIN ASBESTOS

Where ash is known to contain asbestos from the ACD activities noted above, it must be disposed of pursuant to the NESHAP requirements.

V. RECOMMENDATIONS

A. PURPOSE OF THIS SECTION

This section includes demolition and disposal practices that, while not conditions of the no action assurance, EPA recommends that LDEQ follow to the extent feasible.

B. STATE GUIDANCE

EPA supports and defers to existing State regulations, guidance, and policies for managing solid and RCRA hazardous waste for disaster debris.

C. DEMOLITION

To the extent practicable, EPA recommends knocking down each structure wall by wall, folding it in on itself to minimize excess breakage of asbestos containing material. Debris should be moved in a way to minimize breakage.

D. SEGREGATION OF OTHER WASTES

LDEQ should continue efforts to follow the previous guidances on segregating and disposing of wastes such as white goods, electrical equipment (e.g., transformers/capacitors/lighting ballasts) which may contain PCBs, etc.

E. ACD PROCEDURES

1. Combustion of debris is more effective when combustion air can flow through the burning debris. Where possible, maintain the burning debris bed to allow air to flow from the bottom through the bed, and to have the bed burn from top to bottom. This will increase the potential for unburned materials carried by the combustion air to pass

through the hotter combustion zones, resulting in improved combustion performance. Methods of increasing the air flow through the debris bed include layering of less dense debris (those with greater air spaces) below and above more dense debris or providing means for air flow under the debris bed by use of pallets under the debris pile.

2. The operator should ensure that the level of debris in the unit remains below the curtain.

F. DISPOSAL OF ASH FROM BURNED DEBRIS

1. Requirements for disposal of ash generated from open burning of mixed debris are generally governed by the State's regulations, guidance, and policies. If ash contains regulated PCBs, federal requirements apply.
2. The criteria for defining and closing out a burn site will be the responsibility of the State. If the burn site contains regulated PCBs, federal requirements apply.
3. Where practicable and feasible, recommendations for disposal of burned mixed debris include the following:

- Areas that were only used to stage vegetative debris, or ash from burning solely vegetative debris, would not ordinarily require any environmental sampling after the debris or ash is removed unless there is reason to believe that the area may have become contaminated (e.g., significant visible staining or known contaminant releases in the area).

- Materials that could be potentially hazardous and easily moved (e.g., large electrical equipment and propane tanks) should be removed when practical prior to demolition of the residence.

- If ash is left at the site, prudent measures should be taken to protect human health and the environment. If ash is removed from the site, it should be taken to a permitted landfill as approved by the State. If ash contains regulated PCBs, federal requirements apply.

- If ash from open burning is disposed at the site, documentation of closure activities and any restrictions should be performed by the State to inform future owners or developers.